



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,658	01/28/2002	Michael J. Pollack	G0623-670U1	3856
54380	7590	04/04/2006	EXAMINER	
FLASTER/GREENBERG P.C. 8 PENN CENTER 1628 JOHN F. KENNEDY BLVD. 15TH FLOOR PHILADELPHIA, PA 19103			LEE, RICHARD J	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/058,658	<b>Applicant(s)</b> POLLACK, MICHAEL J.	
	<b>Examiner</b> Richard Lee	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2621

1. The applicant is informed that the International Search Report as cited in the IDS filed September 9, 2005 has not been considered by the Examiner since a search report is not considered a publication. A line has been drawn through the citation accordingly as shown in the attached IDS.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al of record (5,956,077) in view of Nance et al of record (6,111,599) and Heid of record (5,993,902).

Qureshi et al discloses an inspection method and apparatus for tanks, and substantially the same optical monitoring system as claimed in claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 for transmitting images from a hostile environment within the interior of a sealed chamber to the chamber exterior, the chamber having a wall and an access port extending through the wall (see Figures 2, 4, 5, column 2, lines 41-47), the monitoring system comprising substantially the same flexible, generally tubular, elongated housing having a distal end, a proximal end and an interior (see 31, 32, 37, 38, 41 of Figures 2 and 8), the proximal end of the housing being rigidly secured to the chamber wall at the access port, the interior of the housing being accessible through the port (see 37 of Figure 2), the interior of the housing including a transmission media for transmitting images of the interior of the chamber from the distal end of the housing to the proximal end of the housing and through the access port (see 41 of Figures 2 and 8, and column

Art Unit: 2621

3, lines 41-51, column 4, lines 3-16, lines 37-67); a monitor located outside of the chamber and connected to the transmission media for receiving and displaying the recorded images of the interior of the chamber (i.e., 67 of Figure 9, and see column 3, lines 41-51, column 4, lines 3-16, lines 37-67); a video camera (i.e., 41 of Figures 2 and 8) positioned to record images of the interior of the chamber; a sensor (i.e., 41 of Figures 2 and 8) for sensing a parameter of the hostile environment, and an apparatus (i.e., 67 of Figure 9) located outside of the chamber and connected to the transmission media for receiving and processing the sensor signal and displaying a representation of the sensor signal.

Qureshi et al does not particularly disclose, though, the followings:

(a) a hermetically sealed housing, the housing being made of a non-porous, corrosive resistant material, the distal end of the housing including a sealed window, wherein the window is formed from a material selected from the group consisting of synthetic sapphire, glass, quartz and a polymeric material, wherein the window is secured to the housing by a method selected from the group consisting of brazing, fusion, and an adhesive, a video camera positioned to record images of the interior of the chamber through the window, a sensor for sensing a parameter of the hostile environment through the window, and transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing as claimed in claims 1, 4, 5, 9, 13, 14, 23, 27, 28, 30, 31;

(b) the proximal end of the housing being rigidly secured to the chamber wall at the access port to form a hermetic seal between the proximal end of the housing and the chamber as claimed in claims 1, 9, 23, 30, and 31.

Regarding (a), Nance et al discloses an apparatus for observing a hostile environment as shown in Figures 1 and 2, and teaches the conventional use of a hermetically sealed housing (i.e., 10 of Figure 2 and see column 4, lines 30-38) made of a non-porous, corrosive resistant material, wherein the distal end of the housing including a sealed window (i.e., 11 or 13 of Figure 2, and see column 4, lines 12-38), wherein the window is formed from a material selected from the group consisting of synthetic sapphire, glass, quartz and a polymeric material, wherein the window is secured to the housing by a method selected from the group consisting of brazing, fusion, and an adhesive (see Figure 2 and column 4, lines 12-38), a video camera/sensor positioned to record images of the hostile environment/interior of the chamber through the window (see 11, 13, 30 of Figure 2 and column 4, lines 12-65), and transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing (see column 4, lines 12-65). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al and Nance et al references in front of him/her and the general knowledge of hermetically seal housings with sealed windows associated with inspecting chambers, would have had no difficulty in modifying the housing structure as shown in Figure 2 of Qureshi et al by providing the non-porous, corrosive resistant hermetically seal housing with the distal end of the housing including a sealed window as shown in Nance et al for the same well known protection of the camera within the housing from hostile environments when inspecting the interior of chambers purposes as claimed.

Regarding (b), Heid teaches the technical features of forming a hermetical seal between the proximal end of a housing (i.e., camera 50 of Figure 1) and the chamber 12 of Figure 1. Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al,

Art Unit: 2621

Nance et al, and Heid references in front of him/her and the general knowledge of securing camera housings at the access ports of chambers, would have had no difficulty in providing the hermetical seal between the proximal end of the housing and the chamber as taught by Heid as part of the modified system within Qureshi et al and Nance et al for the same well known protection from chemical leaks or dangerous gases purposes as claimed.

4. Claims 2, 11, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, and Heid as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (3), and further in view of Stattuck et al of record (4,591,794).

The combination of Qureshi et al, Nance et al, and Heid discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible sheath formed of a stainless steel bellows as claimed in claims 2, 11, and 25. The particular use of stainless steel bellows for housing structures associated with borescopes and monitoring of chambers, however is old and well recognized in the art, as exemplified by Stattuck et al (see column 3, line 64 to column 4, line 30). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, and Stattuck et al references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the stainless steel bellows structure as taught by Stattuck et al for the housing of Qureshi et al for the same well known support and protection of the housing purposes as claimed.

Art Unit: 2621

5. Claims 3, 12, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, and Heid as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (3), and further in view of Chiodo of record (4,540,258).

The combination of Qureshi et al, Nance et al, and Heid discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible polymeric tube as claimed in claims 3, 12, and 26. The particular use of flexible polymeric tubes for housing associated with camera monitoring devices, however is old and well recognized in the art, as exemplified by Chiodo (see 54 of Figure 1 and column 4, lines 48-53). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, and Chiodo references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the flexible polymeric tube structure as taught by Chiodo for the housing of Qureshi et al for the same well known support, protection, and flexible movement of the housing purposes as claimed.

6. Claims 6, 7, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, and Heid as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (3), and further in view of Howell et al of record (3,778,170).

The combination of Qureshi et al, Nance et al, and Heid discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing includes a borescope having a viewing end which is aligned with the sealed window, the interior of the housing including a flexible borescope for transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of

Art Unit: 2621

the housing and through the port, a monitor located outside of the chamber and connected to the borescope for receiving and displaying images of the interior of the chamber, and wherein the transmission media is comprised of fiber optic bundle as claimed in claims 6, 7, and 17.

However, Howell et al discloses a borescope guide tube as shown in Figure 2, and teaches the conventional use of a fiber optic bundle borescope (i.e., 62 of Figure 2, and see column 2, line 53 to column 3, line 7) having a viewing end which is aligned with a sealed window (i.e., as provided by Nance et al), the interior of the housing including a flexible borescope for transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing and through the port (see Figure 2, and column 4, lines 27-49, column 6, lines 32-65), and a monitor (see column 5, lines 12-30) located outside of the chamber and connected to the borescope for receiving and displaying images of the interior of the chamber. Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, and Howell et al references in front of him/her and the general knowledge of borescopes for transmitting and monitoring images, would have had no difficulty in providing the fiber optic bundle borescope for transmitting and monitoring of images as taught by Howell as part of the chamber monitoring within Qureshi et al for the same well known transmission and monitoring of images from a fiber optic borescope purposes as claimed.



Art Unit: 2621

7. Claims 8, 15, 16, 24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, and Heid as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (3), and further in view of Braithwaite et al of record (US 2002/0116987 A1).

The combination of Qureshi et al, Nance et al, and Heid discloses substantially the same optical monitoring system as above, but does not particularly disclose the followings:

(a) wherein the interior of the housing is provided with a fluid under pressure to control the environment within the interior of the housing as claimed in claims 8, 16, and 29;

(b) wherein the camera is an infrared camera as claimed in claim 15; and

(c) wherein the sensor is selected from the group consisting of temperature sensor, a pressure sensor, an oxygen sensor and a spectra graphic chemical analysis sensor as claimed in claim 24.

Regarding (a) to (c), Braithwaite et al discloses an apparatus and method for measuring extensional rheological properties of a material as shown in Figure 1, and teaches the conventional fluid pressure control of an environment within the interior of a housing, temperature sensors, and the use of infrared cameras for monitoring elements within the housing (see sections [0034], [0039], [0040] of page 3, section [0044] of page 4). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, and Braithwaite et al references in front of him/her and the general knowledge of interior environment controls within hostile chambers, would have had no difficulty in providing the infrared camera, temperature sensor, and fluid pressure control system as taught by Braithwaite et al for the interior of the housing of Qureshi et al for the same well known temperature sensing,

Art Unit: 2621

infrared imaging, and fluid pressure control of a hostile chamber environment purposes as claimed.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, Heid, and Howell et al as applied to claims 1, 4-7, 9, 10, 13, 14, 17, 20, 21, 23, 27, 28, 30, and 31 in the above paragraphs (3) and (6), and further in view of Stattuck et al of record (4,591,794).

The combination of Qureshi et al, Nance et al, Heid, and Howell et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible sheath formed of a stainless steel bellows as claimed in claim 18. The particular use of stainless steel bellows for housing structures associated with borescopes and monitoring of chambers, however is old and well recognized in the art, as exemplified by Stattuck et al (see column 3, line 64 to column 4, line 30). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, Howell et al, and Stattuck et al references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the stainless steel bellows structure as taught by Stattuck et al for the housing of Qureshi et al for the same well known support and protection of the housing purposes as claimed.

Art Unit: 2621

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, Heid, and Howell et al as applied to claims 1, 4-7, 9, 10, 13, 14, 17, 20, 21, 23, 27, 28, 30, and 31 in the above paragraphs (3) and (6), and further in view of Chiodo of record (4,540,258).

The combination of Qureshi et al, Nance et al, Heid, and Howell et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible polymeric tube as claimed in claim 19. The particular use of flexible polymeric tubes for housing associated with camera monitoring devices, however is old and well recognized in the art, as exemplified by Chiodo (see 54 of Figure 1 and column 4, lines 48-53). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, Howell et al, and Chiodo references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the flexible polymeric tube structure as taught by Chiodo for the housing of Qureshi et al for the same well known support, protection, and flexible movement of the housing purposes as claimed.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al, Nance et al, Heid, and Howell et al as applied to claims 1, 4-7, 9, 10, 13, 14, 17, 20, 21, 23, 27, 28, 30, and 31 in the above paragraphs (3) and (6), and further in view of Braithwaite et al of record (US 2002/0116987 A1).

The combination of Qureshi et al, Nance et al, Heid, and Howell et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the interior of the housing is provided with a fluid under pressure to control the

Art Unit: 2621

environment within the interior of the housing as claimed in claim 22. However, Braithwaite et al discloses an apparatus and method for measuring extensional rheological properties of a material as shown in Figure 1, and teaches the conventional fluid pressure control of an environment within the interior of a housing (see sections [0034], [0039], [0040] of page 3). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al, Nance et al, Heid, Howell et al, and Braithwaite et al references in front of him/her and the general knowledge of interior environment controls within hostile chambers, would have had no difficulty in providing the fluid pressure control system as taught by Braithwaite et al for the interior of the housing of Qureshi et al for the same well known fluid pressure control of a hostile chamber environment purposes as claimed.

11. Regarding the applicant's arguments at pages 10-14 of the amendment filed January 13, 2006 concerning in general that "... The combination of Qureshi, Nance, and Heid, as proposed by the Examiner, does not render claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30 or 31 unpatentable ... The Qureshi system 10 is intended to be lowered into a tank while the manway is open to inspect another tank and so that the tank can be filled ... Nance is directed to an apparatus for observing a hostile environment ... Heid is direct to an apparatus and method for extending the lifetime of an exhaust sleeve for growing single-crystal silicon by silicon nitride coating ... There is no specific discussion of the structure of the camera, nor of the interface between the camera 50 and the wall of the furnace 12 ...", the Examiner wants to point out that though Qureshi et al, Nance, and Heid may each provide features that are different from the present invention, it is still nevertheless that the combination references discloses and renders obvious the claimed invention.

Regarding the applicant's arguments at page 14 of the amendment filed January 13, 2006 concerning in general that Qureshi, Nance, and Heid are not properly combinable and it is impermissible to use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, even if suggestion for combination is not particularly specified in Qureshi, Nance, or Heid, the question in the test for combining references in a section 103 rejection is not solely relied on what the individual reference expressly teaches. *In re McLaughlin*, 170 USPQ 209-213:

"It should be too well settled now to require citation or discussion that the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. Any judgement on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper".

Therefore, even though Qureshi, Nance, or Heid taken singularly suggests the combination as claimed, the combination of Qureshi, Nance, and Heid taken as a whole would have been obvious to one of ordinary skill in the art for the above reasons.

Regarding the applicant's arguments at pages 14-15 of the amendment filed January 13, 2006 concerning in general that "... the Examiner has not pointed to a specific objective teaching in any of the references which would suggest the combination. The blanket statement that one of

ordinary skill in the art would have “no difficulty” in making the suggested combination is insufficient for supporting a combination of the references ... The Examiner improperly states the standard for combining references ... the Examiner relies on the presumption that the references are already before one of ordinary skill in the art and thus places the cart before the horse. To have the references before one of ordinary skill in the art, there must first be an objective teaching ... The Qureshi manhole must be open during ordinary use of the inspection system. Because of this, the tank being inspected by the Qureshi system cannot be hermetically sealed ...”, the Examiner respectfully disagrees. The Examiner wants to initially point out that Qureshi, Nance, and Heid all deal with the inspection of hostile environments to provide remote viewing, and the combination of the references is deemed proper. The Examiner believes that the grounds of rejections have been clearly set forth in the above, and no “blanket statement” has been provided in any of the rejections. With the above in mind, since Qureshi teaches that there may be chemicals being exposed within the tank (see column 1, lines 13-27), there obviously is a need to protect the camera system when viewing the inside of the tank and one way is to use a hermetically sealed system, for example, as provided by Nance. Hence, it is submitted again that it is considered obvious to modify the housing structure as shown in Figure 2 of Qureshi by providing the non-porous, corrosive resistant hermetically seal housing with the distal end of the housing including a sealed window as shown in Nance et al. Further, the hermetical seal between the proximal end of the housing and the chamber as taught by Heid may obviously be providing within the modified system of Qureshi and Nance, thereby rendering obvious the claimed invention.

Regarding the applicant’s arguments at pages 15-17 of the amendment filed January 13, 2006 concerning in general that “... The combination is lacking at least two elements recited in independent claims 1, 9, 23, 30 and 31 ... At best, the combination of Qureshi and Nance would yield a modified portable device in which a double-wall vacuum bottle with an open end is

Art Unit: 2621

disposed around the camera ... Heid contains no discussion of whether the camera is even secured to the top of the furnace, let alone whether a hermetic seal is formed between the proximal end of the camera and the furnace. Heid contains no discussion of whether the camera is even secured to the top of the furnace, let alone whether a hermetic seal is formed between the proximal end of the camera and the furnace ... Heid does not disclose a camera within a housing that is attached to a chamber wall with a hermetic seal between the housing and the chamber ...”, the Examiner respectfully disagrees. It is again that it is considered obvious to modify the housing structure as shown in Figure 2 of Qureshi by providing the non-porous, corrosive resistant hermetically seal housing with the distal end of the housing including a sealed window as shown in Nance et al. Regarding Heid, since the furnace is hermetically sealed (see column 3, lines 22-30), it is therefore clear that a hermetic seal is provided between the proximal end of a housing (i.e., camera 50) and the chamber 12. This is clearly shown in Figure 1 of Heid.

Regarding the applicant's arguments at pages 17-18 of the amendment filed January 13, 2006 concerning in general that "... The Qureshi system is portable and is lowered into an open manway hole on a railroad tank car to inspect the interior of the tank and then removed therefrom to allow the system to be inserted into another railroad tank car to inspect the interior of the tank of that car so that the first car can then be filled and used after inspection ... one of ordinary skill in the art would not believe that the portable system would be successful if the device were hermetically sealed to the car and, instead, would render it unsatisfactory for its intended purpose ... ", the Examiner wants to point out again that though Qureshi may disclose various features that are different from the present invention, the combination of Qureshi, Nance, and Heid nevertheless encompasses the claimed invention. And the system of Qureshi may certainly be provided with a hermetic sealed structure as provided by Nance for reasons above.

Regarding the applicant's arguments at pages 18-21 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection in view of the combination of Qureshi,

Art Unit: 2621

Nance, Heid and Shattuck, and in particular that "...the Examiner has relied on non-analogous art ... Shattuck discloses (1) bellows tubing accommodating only conductors, and does not disclose bellows tubing for the housing of monitoring equipment; and (2) bellows tubing which is open at one end, and therefore is also not hermetically sealed ... the probe as a whole is merely adapted for insertion into a borescope access port of an engine ... By providing the stainless steel bellows structure of Shattuck for the Qureshi inspection system, it is not at all clear the system would still be sufficient to be maneuverable through the manway and within the interior of a tank for the inspection thereof ...", the Examiner wants to point out that Qureshi, Nance, Heid, and Shattuck all involve monitoring techniques involving the imaging of dangerous, inaccessible, or hazardous environments for remote viewing, and as such they are all considered analogous art that may obviously be combinable. The conventional use of stainless steel bellows as taught by Shattuck may obviously be used for the housing structure of Qureshi, thereby rendering obvious the claimed invention.

Regarding the applicant's arguments at pages 21-23 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection in view of the combination of Qureshi, Nance, Heid and Chiodo, and in particular that "... The Qureshi device is not sealed, whereas the device of the Chiodo patent is sealed ... Since the art of Chiodo is not in the same field of endeavor and as Qureshi, Nance, and Heid, and the references have divergent purposes, the combination is a piecemeal attempt to reconstruct the claims using impermissible hindsight ... Chiodo does not teach or suggest a hermetically sealed housing having, within an interior thereof, a transmission media for transmitting an image ...", the Examiner respectfully disagrees and wants to point out that Chiodo is being relied upon for the teachings of how well known flexible polymeric tubes are in use with imaging system, such as the housing of Qureshi to provide the support, protection, and flexible movement of the housing.



Regarding the applicant's arguments at pages 23-25 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection in view of the combination of Qureshi, Nance, Heid and Howell, and in particular that "... the Examiner has not pointed to an objective teaching in Howell which would lead one to combine Howell with Qureshi, Nance, and Heid ... the present combination including Howell fails to teach or suggest all elements of claims 6 and 7 ... While Howell discloses a guide tube for directing a borescope, Howell does not teach or suggest a hermetically sealed housing, rigidly secured to the wall of a chamber to form a hermetic seal with a chamber ...", the Examiner wants to point out that Howell nevertheless teaches the conventional use of a fiber optic bundle borescope (i.e., 62 of Figure 2, and see column 2, line 53 to column 3, line 7) having a viewing end which is aligned with a sealed window (i.e., as provided by Nance et al), the interior of the housing including a flexible borescope for transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing and through the port (see Figure 2, and column 4, lines 27-49, column 6, lines 32-65), and a monitor (see column 5, lines 12-30) located outside of the chamber and connected to the borescope for receiving and displaying images of the interior of the chamber. And, it is considered obvious to provide the fiber optic bundle borescope for transmitting and monitoring of images as taught by Howell as part of the chamber monitoring within Qureshi et al, thereby rendering obvious the claimed invention.

Regarding the applicant's arguments at pages 25-28 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection in view of the combination of Qureshi, Nance, Heid and Braithwaite, and in particular that "... the Examiner improperly states the

Art Unit: 2621

standard for combining references ... monitoring rheological properties of fluid flow would not be useful for monitoring empty tank cars as in Qureshi ... Braithwaite does not teach or suggest the controlling of an environment within an interior of a housing within which sensors and/or cameras are located for the monitoring of an environment outside of the housing ... Braithwaite does not disclose a spectrographic chemical sensor ... the resultant combination is not rendered obvious ... ", the Examiner respectfully disagrees. Braithwaite clearly teaches the particular use of an infrared camera and temperature sensor within a fluid pressure control system that may obvious be provided for the interior of the housing of Qureshi for the same sensing, imaging, and fluid pressure control of a hostile chamber environment, thereby rendering obvious the claimed invention.

Regarding the applicant's arguments at pages 28-32 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection of claim 18 in view of the combination of Qureshi, Nance, Heid, Howell, and Stattuck, the Examiner wants to point out that such arguments have been addressed in the above.

Regarding the applicant's arguments at pages 32-34 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection of claim 19, and in general that "... The art of Chiodo is not in the same field of endeavor ... Chiodo is in the field of apparatuses for photographing body cavities, classified in class 396/subclass 17 ... Chiodo does not teach or suggest a hermetically seal housing ... ", the Examiner recognizes that though Chiodo provides a system for photographing body cavities, it is nevertheless that Chiodo and the applied references deal with imaging techniques and as such the combination references as applied are deemed proper. The particular use of polymeric materials as claimed is nevertheless considered obvious

Art Unit: 2621

in view of the applied references since Chiodo teaches the particular well known flexible polymeric tube material for use in camera monitoring devices.

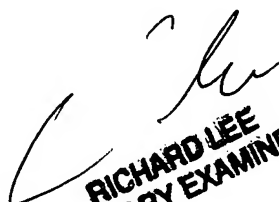
Regarding the applicant's arguments at pages 34-37 of the amendment filed January 13, 2006 concerning in general the traversal of the rejection of claim 22 in view of the combination of Qureshi, Nance, Heid, Howell, and Braithwaite, the Examiner wants to point out that such arguments have been addressed in the above.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2621

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (571) 272-7333. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

  
**RICHARD LEE**  
**PRIMARY EXAMINER**

Richard Lee/rl

3/28/06

